

Listing of the Claims

Claims 1-19. Canceled

Claim 20 (new). A bus power-supply device structured to supply power from a power-supply voltage of a node of a proceeding stage to a node of a next stage through a serial bus connected to said node by a physical layer and a plurality of connectors conductive to each other of the node, wherein

when a power-supply voltage of said node of the proceeding stage is not supplied, a DC voltage is supplied from said node of the proceeding stage through said serial bus to said physical layer, and when said power-supply voltage is supplied, a DC voltage is supplies from said power-supply voltage to said physical layer by cutting off a path for supplying a DC voltage through said serial bus to said physical layer.

Claim 21 (new). The bus power-supply as set forth in claim 20, comprising:

voltage detection unit which detects said power-supply voltage being supplied or not being supplied; and

selector which supplies a DC voltage coming through said serial bus to said physical layer when said voltage detection unit is yet to detect supply of a power-supply voltage and supplies a DC voltage from the power-supply voltage to said physical layer by cutting off said path for supplying a DC voltage through said serial bus to said physical layer when said voltage detection unit detects supply.

Claim 22 (new). The bus power-supply as set forth in claim 20, wherein said serial bus is an IEEE-1394-1995 Standard serial bus.

Claim 23 (new). The bus power-supply device as set forth in claim 21, comprising:

a first path for supplying power from said power-supply voltage to said physical layer; and

a second path for supplying power coming through said serial bus to said physical layer, wherein

when power is supplied from said power-supply voltage, said selector cuts off said second path.

Claim 24 (new). The bus power-supply device as set forth in claim 21, wherein said selector is a semiconductor switch.

Claim 25 (new). The bus power-supply device as set forth in claim 21, wherein said voltage detection unit is a comparator.

Claim 26 (new). The bus power-supply device as set forth in claim 21 wherein a relay element functions as said voltage detection unit and said selector.

Claim 27 (new). The bus power-supply device as set forth in claim 20, comprising:

a power-supply circuit which converts said power-supply voltage into a DC voltage for said serial bus and outputs said DC voltage;

a converter which converts a DC voltage output from said power-supply circuit into a DC voltage for said physical layer;

a voltage detection unit which detects said power-supply voltage being supplied or not being supplied to said power-supply circuit; and

a selector which supplies a DC voltage applied through said serial bus to said converter when said power-supply voltage is not supplied to said power-supply circuit and cuts off a path for supplying a DC voltage through said serial bus to said converter to supply an output of said power-supply circuit to said converter when said power-supply voltage is supplied.

Claim 28 (new). The bus power-supply device as set forth in claim 27, comprising

a first path for supplying power from said power-supply voltage to said physical layer; and

a second path for supplying power coming through said serial bus to said physical layer, wherein

when power is supplied from said power-supply voltage, said selector cuts off said second path.

Claim 29 (new). The bus power-supply device as set forth in claim 27, wherein said voltage detection unit detects said power-supply voltage being supplied or not being supplied by detecting an output voltage of said power-supply circuit.

Claim 30 (new). The bus power-supply device as set forth in claim 27, wherein said voltage detection unit detects said power-supply voltage being supplied or not being supplied by detecting an output voltage of said power-supply circuit, and which further comprises

a first path for supplying power from said power-supply voltage to said physical layer; and

a second path for supplying power coming through said serial bus to said physical layer, wherein

when power is supplied from said power-supply voltage, said selector cuts off said second path.

Claim 31 (new). The bus power-supply device as set forth in claim 27, comprising:

a first path for supplying power from said power-supply voltage to said physical layer; and

a second path for supplying power coming through said serial bus to said physical layer, wherein

when power is supplied from said power-supply voltage, said selector cuts off said second path, and

wherein said selector is a semiconductor switch.

Claim 32 (new). The bus power-supply device as set forth in claim 27, wherein

said voltage detection unit detects said power-supply voltage being supplied or not being supplied by detecting an output voltage of said power-supply circuit, and

wherein said selector is a semiconductor switch.

Claim 33 (new). The bus power-supply device as set forth in claim 27, wherein said voltage detection unit is a comparator.

Claim 34 (new). The bus power-supply device as set forth in claim 27 wherein a relay element functions as said voltage detection unit and said selector.

Claim 35 (new). A node having a bus power-supply device structured to supply power from a power-supply voltage to a node of a next stage through a serial bus connected to said node by a physical layer and a plurality of connectors conductive to each other of the node, comprising:

a plurality of connectors each having a power-supply terminal to which a DC voltage is applied from other nodes through said serial bus and a signal terminal to and from which a signal from other nodes in input and output;

a physical layer which outputs a signal input through a signal terminal of one connector to a signal terminal of the other connector, wherein

power-supply terminals of said plurality of connectors are rendered conductive to each other,

said bus power-supply device

supplies a DC voltage through said serial bus to said physical layer through said power-supply terminal when none of a power-supply voltage of said node is supplied, and

supplies a DC voltage from the power-supply voltage to said physical layer by cutting off a path for supplying a DC voltage through said serial bus to said physical layer when said power-supply voltage is supplied.

Claim 36 (new). The node as set forth in claim 35, wherein said bus power-supply device comprises

voltage detection unit which detects said power-supply voltage being supplied or not being supplied; and

selector which supplies a DC voltage coming through said serial bus to said physical layer when said voltage detection unit is yet to detect supply of a power-supply voltage and supplies a DC voltage from the power-supply voltage to said physical layer by cutting off said path for supplying a DC voltage through said serial bus to said physical layer when said voltage detection unit detects supply.

Claim 37 (new). The node as set forth in claim 36, comprising

a first path for supplying power from said power-supply voltage to said physical layer; and

a second path for supplying power coming through said serial bus to said physical layer, wherein

when power is supplied from said power-supply voltage, said selector cuts off said second path.

Claim 38 (new). The node as set forth in claim 35, wherein said bus power-supply device comprises

a power-supply circuit which converts said power-supply voltage into a DC voltage for said serial bus and outputs said DC voltage;

a converter which converts a DC voltage output from said power-supply circuit into a DC voltage for said physical layer;

a voltage detection unit which detects said power-supply voltage being supplied or not being supplied to said power-supply circuit; and

a selector which supplies a DC voltage applied through said serial bus to said converter when said power-supply voltage is not supplied to said power-supply circuit and cuts off a path for supplying a DC voltage through said serial bus to said converter to supply an output of said power-supply circuit to said converter when said power-supply voltage is supplied.